LPC 1970750002 - Will Co.
Custom Blended Oils
ILD 069503944
SF/HRS

Site Investigation

Prepared by:
Office of Site Evaluation
Division of Remediation Management
Bureau of Land

CERCLA
SITE INVESTIGATION

For:

Custom Blended Oils
Will County, Peotone, IL
ILD 069503944 / LPC 1970750002

PREPARED BY:
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF LAND
DIVISION OF REMEDIATION MANAGEMENT
OFFICE OF SITE EVALUATION

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SITE INVESTIGATION
Custom Blended Oils

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Section 1.0 Introduction

On May 28, 2008, the Illinois Environmental Protection Agency's (Illinois EPA) Office of Site Evaluation, was tasked by the United States Environmental Protection Agency (U.S. EPA) Region V to conduct a Site Investigation (SI) at the Custom Blended Oils site in Peotone, Will County, Illinois. The SI was performed under the authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) commonly known as Superfund. The site was placed on CERCLIS (Comprehensive Environmental Response Liability Inventory System) in March of 1998, due to on going violations of the Illinois Environmental Protection Act.

The primary objective of a Site Inspection is to gather necessary information needed to evaluate the extent that a site presents a threat to human health and/or the environment. This is collecting and analyzing wastes and environmental media samples to determine whether hazardous substances are present at the site and are migrating to the surrounding environment. At the conclusion of the Site Inspection, a determination will be made whether the site qualifies for additional evaluation under Superfund or should be dropped from further Superfund consideration. Additionally, the Site Inspection supports removal and enforcement actions and collects data to support further Superfund or other response actions. The Site Inspection is not intended to be a detailed evaluation of contamination or risk assessment. If the evaluation of the site indicates that the site qualifies for additional Superfund evaluation, an Expanded Site Inspection may be conducted. In some cases an Expanded Site Inspection will be conducted to address critical hypotheses or assumptions that were not completely supported during the SI.

The SI is performed under the authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) commonly known as Superfund.

Prior to conducting the field investigation the Illinois Environmental Protection Agency prepared a site-specific work plan that was submitted to U.S. EPA Region V, in June 2008. The field activity portion of the SI was conducted during the weeks of June 9th and June 16th , in that same year. Other SI activities included interviews with personnel associated with the site, the review of Illinois EPA file information, review of existing private well sample results, and the collection of sediment, groundwater, and residential well samples from home near the site.

Section 2.0 Site Background

Section 2.1 Site Description

The Custom Blended Oil site is an abandoned waste oil reprocessing facility located at 31755 South Rathje Road, Peotone, Will County, Illinois. The site is approximately five acres in size and the surrounding land is zoned for agriculture use. The site is bordered by an agriculture field to the north, Rathje Road to the west, an industrial facility to the south, and an agriculture field and railroad tracks to the east.

The facility is comprised of on large warehouse type building and one smaller industrial type building. A majority of the surface of the grounds around these buildings is gravel with a few vegetated areas. A locked fence surrounds the perimeter and resists access to the site. Currently, Twin Lake Landscaping occupies the property and utilizes the main building for storage and

maintenance of their equipment.

Field tiles that were constructed for draining the farm fields, run under the site, flowing west to east. The field tile terminates at a drainage ditch that flows to the north and parallels an active railroad grade, the drainage is then directed east under the railroad tracks and then into another drainage ditch. This ditch empties into the Black Walnut Creek which eventually empties into the Kankakee River.

Section 2.2 Site History

Illinois Environmental Protection Agency file information indicates that the site originated as E&L Tank Cleaners. E&L Tank Cleaners first applied for a soil waste management permit from the Illinois EPA in January of 1981. This application was incomplete and it appears that E&L Tank Cleaners did not complete the permit process. In 1988, Custom Blended Oils was established and operated at the former E&L Tank Cleaner's Peotone location through March of 1997. During this time period Custom Blended Oils received waste oil from service stations and processed the waste oil to remove solids and water before selling it as fuel to industrial facilities.

The Illinois EPA first inspected the site in 1990 and as a result of this inspection an Illinois EPA Enforcement Notice Letter was sent to the facility. In 1991, the site was referred by the Illinois EPA to the Illinois Attorney General's Office (IAGO). According to the IAGO records, numerous permit violations concerning improper maintenance of Aboveground Storage Tanks (ASTs) were documented between 1990 and 1997. In March 1997, Custom Blended Oil filed for

Chapter 7 bankruptcy protection. In 1997, USEPA's emergency removal group responded to an oil spill at Custom Blended Oils. More information on the oil spill response/investigation can be found in Section 2.3, of this report. In 1999, the statuses of the previous violations were reviewed by the Illinois EPA and the site was found to be in compliance. This review did not recommend any further follow-up activities. In 2002, the Illinois EPA conducted a small scale drinking water investigation in the area immediately surrounding the site. Further information on this investigation can also be found in Section 2.3, of this report.

Section 2.3 Previous Investigations

In June 1997, USEPA's emergency removal group responded to an oil spill at Custom Blended Oils. During this response activity approximately 20,000 gallons of released oil mixed with water was contained, pumped, and temporarily stored on site in two process tanks. Later in June 1997, an inspection was conducted by USEPA and the IAGO. During this inspection a USEPA contractor conducted a removal site assessment of the property. Samples collected over the course of this assessment documented the presence of Resource Conservation Recovery Act (RCRA) hazardous waste. In February 1998, USEPA began a removal of the hazardous materials from the site.

In September of 2002, the Illinois EPA's Field Operation Section (FOS) conducted a groundwater sampling investigation of residents near Custom Blended Oils. This investigation consisted of the sampling of four private wells near the site. Analytic results generated as a result of this investigation documented elevated levels of antimony, thallium and several semi-volatile compounds within a number of these wells.

Section 2.4 Regulatory Status

Based upon available file information Custom Blended Oils was not regulated under the authority of the Atomic Energy Act (AEA), Uranium Mine Tailings Action (UMTRCA), or the Federal Insecticide Fungicide or Rodenticide Act (FIFRA).

Custom Blended Oils was originally regulated by the Resource Conservation Recovery Act (RCRA) and subject to RCRA corrective action authorities. The enforcement case against Custom Blended Oils was based on RCRA violations. Once Custom Blended Oils filed for Chapter 7 bankruptcy protection, the regulatory activities shifted to CERCLA.

Section 3.0 Site Inspection Activities

Section 3.1 Sampling Activities

3.1.1 Direct Push Technology Sampling Activities

During the CERCLA Site Investigation, the field team utilized direct push technology to collect subsurface soils samples at seven locations throughout the original process/spill area at Custom Blended Oils. This area is commonly referred to as the "material storage area". These borings ranged from 10 to 12 feet in depth below the grounds surface. At approximately eight feet, a native glacial till was encountered at most of these locations. Five soil samples were collected and analyzed for the full Target Compound List. Soil sample descriptions can be found in Table 5.2, sample locations can be found on Figure 4. All samples collected were analyzed for the full

Target Compound List (TCL).

Sample X101, was a subsurface soil sample collected at a depth of seven feet below the grounds surface from Geoprobe boring GP01, which was located in the northwest corner of the material storage area. The location and depth, of Sample X101 was selected in an attempt to characterize the condition of the subsurface soils below the fill material deposited during the 1997 CERCLA time critical removal action.

X102, was a subsurface soil sample collected at a depth of ten feet below the grounds surface from Geoprobe boring GP02, in the northeast corner of material storage area. This area was selected to characterize the extent of the 1997 oil/waste oil spill. This soil boring confirmed the fact that the removal excavation extended out to this point.

X103, was a subsurface soil sample collected at a depth of seven to eight feet below the grounds surface from Geoprobe boring GP03, in the middle of the western portion of the material storage area. The location and depth, of Sample X103 was selected in an attempt to characterize the condition of the subsurface soils below the fill material deposited during the 1997 CERCLA time critical removal action.

X104, was a subsurface soil sample collected at a depth of six feet below the grounds surface from Geoprobe boring GP06, in the northwest quadrant of the material storage area. The location and depth, of Sample X104 was selected in an attempt to characterize the condition of the subsurface soils just above the native subsurface soils.

X105, was a subsurface soil sample collected at a depth of seven feet below the grounds surface from Geoprobe boring GP06, in the northwest corner of the material storage area. This depth was selected to characterize the soils at the bottom of the removal excavation.

3.1.2 Residential Drinking Water Sampling Activities

During the CERCLA Site Inspection Illinois EPA sampled six residential wells in close proximity to site. This action was conducted in an attempt to determine if nearby private wells had been impacted by any groundwater contamination that may be associated with past activities at the site. All residential well samples were analyzed for all Target Compound List analytes. Residential drinking water sample descriptions can be found in Table 5.1 of this report. Sample locations can be found on Figure 5.

Prior to the collection of the residential drinking water samples the pH, conductivity, and temperature readings were allowed to stabilize. These samples were also collected from points that did not pass through any water treatment or conditioning systems that may have existed at the residence. The following is a summary of those samples.

G201, was a residential water well sample collected from a private residents located north of the Custom Blended Oils site. This residence was selected because it is believed to be up-gradient of the site, and therefore used to establish background groundwater concentrations for the area.

G202/G203, was a residential water sample collected from a private residents located north of the site, and immediately south of sample location G201. This residential location was selected

because it too was believed to be up-gradient of the site, and therefore used to establish background concentrations for the area.

G204, was a residential water sample collected directly south of the Custom Blended Oil site, and represents the closest down gradient residence to the site. This location was selected because if a release to groundwater had occurred from the site, this well would have in all likelihood, been impacted by it.

G205, was a residential water sample collected southwest of the site and represents the furthest down gradient residential well sample collected during this CERCLA investigation. This location was selected to determine the extent contamination that may be associated with a potential groundwater release from this site.

G206, was a residential water sample collected during this CERCLA investigation. The residence was located southwest of the site, east of G205. This location was selected to determine if a release to groundwater had occurred and migrated eastward toward G205.

G207, was a residential water sample collected during this CERCLA investigation. The residence is directly south of the site and adjacent to G204, making it the second closest private well to the site. This location was selected to determine if a release had occurred and if this location was impacted by it.

3.1.3 Groundwater Sampling Activities

Three existing monitoring wells were sampled during the CERCLA Site Investigation of Custom Blended Oils. These wells were sampled to determine if there has been a release to groundwater from past site operations. All three groundwater samples were collected and analyzed for the entire CERCLA Target Compound List. Groundwater sample descriptions can be found in Table 5.2, of this report, sample locations can be found on Figure 4.

G101, was a groundwater sample collected from an existing monitoring well. This was a two inch, PCV well approximately 41 feet in depth. It is important to note that this well was unsecure prior to the sampling of it. This well was selected to determine if a release to groundwater had occurred at or near the source area.

G102, was a groundwater sample collected from an existing monitoring well. This was a two inch, PVC well approximately 42 feet in depth. It is important to note that this well was unsecure and open to the environment prior to the sampling of it. This well was selected to determine if a release to groundwater had occurred and if it was migrating to the southwest of the material storage area.

G103, was a groundwater sample collected from an existing monitoring well. This was a two inch, PVC well approximately 41 feet in depth. It is important to note that this well was unsecure prior to the sampling of it. This location was selected to determine if a release to groundwater

had occurred and if it was migrating to the west of the material storage area.

3.1.4 Sediment Sampling Activities

The Illinois EPA collected a total of eight sediment samples from seven locations along the surface water pathway. These samples were collected to determine if materials from the site had migrated off site along the overland flow path, and had contaminated the nearby perennial waterway. The samples were collected and analyzed for the entire CERCLA Target Compound List. Sediment sample descriptions can be found in Table 5.1 of this report, sample locations can be found on Figure 5.

Section 3.2 Analytical Results

The sample containers for this investigation were provided by the Illinois Environmental Protection Agency's Division of Laboratories, and were packaged and sealed in accordance with existing Illinois EPA's Office of Site Evaluation procedures. Sample analysis was provided by the USEPA's Contract Laboratory Program (CLP), which in this case utilized the USEPA's Central Regional Laboratory (CRL) which is located in Chicago, Illinois. A complete analytical data package, including quality assurance review sheets, for the Custom Blended Oils site is located in Appendix B, of this report.

The criterion used to determine if an observed release had occurred is based upon those samples whose concentrations are at least three times the established background levels. Samples meeting this criterion will be used to evaluate the site using the Hazard Ranking System (HRS).

3.2.1 Soil Sample Results

The analytical results of the five soil samples collected for this inspection revealed the low level presence of several volatile organic compounds (VOCs), organic compounds, and inorganic elements. Specifically: 1,1-dichloroethane, 1,1-dichloroethene, 4-bromofluorobenzene, acetone, benzene, carbon disulfide, chlorobenzene, chloroethane, cis-1,2-dichloroethene, ethylbenzene, methylene chloride, naphthalene, n-butylbenzene, n-propylbenzene, p-isopropyltoluene, sec-butylbenzene, toluene, trans-1,2-dichloroethene, trichloroethene, 2-methylnaphthalene, chrysene, phenanthrene, pyrene, arsenic, and lead. Acetone and methylene chloride were also detected in a number of these samples, however their presence may be attributed to the fact that both are common laboratory artifacts.

All of these soil samples were collected at depths greater than two feet below the grounds surface. They were intended to characterize the condition of the subsurface soils not removed during the 1997 CERCLA time critical removal action and determine if contamination is still present from past site operations.

3.2.2 Residential Drinking Water Sample Results

The analytical results from the residential drinking water samples collected over the course of this CERLCA Investigation revealed the low level presence of several volatile organic compounds (VOCs), organic compounds, and inorganic elements. Specifically: acetone, bromomethane, 4-bromofluorobenzene, hexachlorobutadiene, methylene chloride, naphthalene, 1,1,2-trichlorethane, 1,1,1-trichloroethane, phenol, 2-fluorophenol, phenol-d5, nitrobenzene, 2-fluorobiphenyl, 2,4,6-tribromophenol, bis(2-ethylhexyl)phthalate, arsenic, and lead. A summary

of these results can be found in Table 1.3, Table 3.3, and Table 4.4 of this report.

A majority of the above listed contaminants: do not meet the criterion for an observed release, are considered a laboratory artifact, or were also found in the field blank. Lead is the only contaminant that does not belong in any of the aforementioned categories. Drinking water sample G206, reported lead at 5.3 ug/L, currently the Superfund Chemical Data Matrix (SCDM) does not have an accepted value for lead, but the Maximum Contaminant Level (MCL) for it is 5.0 ug/L. Lead is also three times the concentration found in background sample G202.

3.2.3 Groundwater Monitoring Well Sample Results

The analytical results from the residential drinking water samples collected over the course of this CERCLA investigation revealed the low level presence of several volatile organic compounds (VOCs), organic compounds, and inorganic elements. Specifically: acetone, bromomethane, 4-bromofluorobenzene, benzene, methylene chloride, m,p-xylene, 2-fluorophenol, 2-fluorobiphenyl, 2,4,6-tribromophenol, antimony, arsenic, cadmium, lead, selenium, and thallium.

A majority of the above listed contaminants: do not meet the criterion for an observed release, are considered a laboratory artifact, or were also found in the field blank. Lead and arsenic are the only contaminants that do not belong in any of the aforementioned categories. All three groundwater sample locations had lead levels three times background concentrations, the highest being sample G104, at 26.2 ug/L. Two of these locations also reported arsenic levels that exceeded three times background concentrations, the highest being sample G104, at 30.3 ug/L.

3.2.4 Sediment Sample Results

The analytical results of the sediment samples collected for this inspection revealed the low level presence of: volatile organic compounds (VOCs), organic compounds, and inorganic elements. Specifically: 4-bromofluorobenzene, acetone, bromomethane, carbon disulfide, methylene chloride, 2,4,6-tribromophenol, 2-fluorobiphenyl, 2-fluorophenol, benzo(a)anthracene, benzo(k)fluoranthene, chrysene, fluoranthene, phenanthrene, pyrene, antimony, arsenic, cadmium, lead, and selenium.

A majority of the above listed contaminants do not meet the three times background criterion to be considered as a release to the surface water pathway or, are considered to be a laboratory artifact. In sediment sample X203, chrysene, fluoranthene, and pyrene exceed the established background concentrations by three times but this sediment sample was collected from an intermitted drainage way and therefore does not meet the criterion for an observed release to the surface water pathway.

Section 4.0 Site Sources

This section includes descriptions of the various hazardous waste sources that have been identified at the Custom Blended Oils site. The Hazard Ranking System defines a "source" as: "Any area where a hazardous substance has been stored, disposed or placed, plus those soils that have become contaminated from migration of hazardous of hazardous substance". This does not include surface water or sediments below surface water that become contaminated.

Information obtained during this investigation has identified the former spill area as a potential

source of groundwater and surface water contamination. This area is approximately 22,000 square feet in size and was the subject of the 1997 USEPA time critical removal at Custom Blended Oils. Based on these conditions the spill area is classified as "other" for CERCLA purposes.

Sample results from this investigation indicated that this was a potential source of groundwater contamination at the facility. The contaminants of concern associated with this source are lead and arsenic.

Section 5.0 Migration Pathways

CERCLA identifies three migration pathways and one exposure pathway that are to be evaluated as a part of the CERCLA Hazard Ranking System. The analysis of these pathways will determine if hazardous substances associated with a site may pose a threat to human health and/or the environment. Consequently, sites are evaluated on their known or potential impact to the groundwater migration, surface water migration, soil exposure, and air migration pathways.

Section 5.1 Groundwater Pathway

Groundwater is used as a source of drinking water for both private residences and community systems in this region. The private wells range from approximately 101-205 feet in depth (sand and gravel), and the community wells range from approximately 150-700 feet in depth (Silurian Dolomite). Separating these two aquifers is a confining layer of blue shale and blue clay. The shallow sand and gravel aquifer is the aquifer of concern (AOC). Underlying the glacial-drift is the Fort Atkinson Limestone and Scales Shales, and the Galena and Platteville Groups. Groundwater

flow of the lower aquifer is believed to be to the south/southwest toward the Kankakee River.

Based on the analytical results of this investigation there is an observed release to groundwater for lead and arsenic. Lead was also three times background concentrations for one of the five down gradient residential wells that were sampled during this investigation. These wells utilize the glacial drift (sand and gravel) aquifer. This is a documented release to the glacial drift aquifer that has also impacted a residential well. As stated earlier the glacial drift aquifer is the aquifer of concern (AOC) for this site.

Section 5.2 Surface Water Pathway

This pathway begins where surface water run-off from the site enters the first perennial water body. That point is referred to as the Probable Point of Entry (PPE). This pathway then travels fifteen miles down-stream completing the 15-Mile Target Distance Limit (TDL).

For this site, surface run-off from the site flows 2640 feet to the north along the west side of an active railroad line then flows under the railroad line and continues north along the east side of the railroad line. The drainage route then flows an additional 1690 feet to the east along a well defined unnamed drainage ditch that empties into the Black Walnut Creek. Black Walnut Creek represents the PPE for the Custom Blended Oils site. The route then flows south along Black Walnut Creek for 2.8 miles until the creek terminates at the confluence with the South Branch of the Marshall Slough. The route follows the slough for 1.6 miles and then empties into the Rock Creek and continues an additional 10.6 miles to complete the 15 mile TDL. The 15 mile TDL terminates at a point within Rock Creek, approximately seven miles east of Manteno, Illinois.

There are no surface water intakes located along this 15-Mile TDL. (See Figure 3)

Eight sediment samples including one duplicate sample were collected along this pathway. Three of these samples were collected before the PPE and four after it. One background sample was up-stream of these samples at a point believed to be uninfluenced by past or present site activities. None of the samples collected after the PPE meet the three times background criterion, therefore for CERCLA purposes an observed release to surface water was not documented.

Section 5.3 Soil Exposure Pathway

This exposure Route focuses on contaminated soil in the upper two feet of the ground surface and within 200 feet of an occupied residence. No soil samples were collected within this zone due to the fact that surface soils were removed from the site as part of the 1997, time critical removal action. Soil borings indicate that the depth of the removal excavation ranged from six to eight feet.

Nearby population within one-mile of the site

Distance (mi)	Population
On-site	0
0-1/ 4	9
1/ 4 -1/ 2	12
1/ 2 – 1 mile	72

The number of people was calculated using population data as established by the U.S. Census Bureau.

Section 5.4 Air Pathway

No formal air samples were collected during the Site Inspection. An estimated 3,195 people reside within a four-mile radius of the site.

Individuals potentially exposed to air-borne contaminants

Distance (mi)	Population
0 - ¼	9
1/ 4 – 1/ 2	12
1/ 2 – 1	72
1 – 2	780
2 – 3	2052
3 – 4	270

The number of people was calculated using population data established by the U.S. Census Bureau.

Section 6.0 References

Bureau of the Census, County and City Data Book. U.S. Census Data. 2000.

http://start.cortera.com/company/research/k2o0kyq3m/custom-blended-oils-inc/

Illinois Environmental Protection Agency. Bureau of Land: File Information.

Illinois Natural Resources Geospatial Data Clearinghouse. Digital Topographic Maps.

U.S. Fish & Wildlife Service. Division of Habitat and Resource Conservation. Wetlands Geodatabase. Digital Wetland Mapper. 2007.

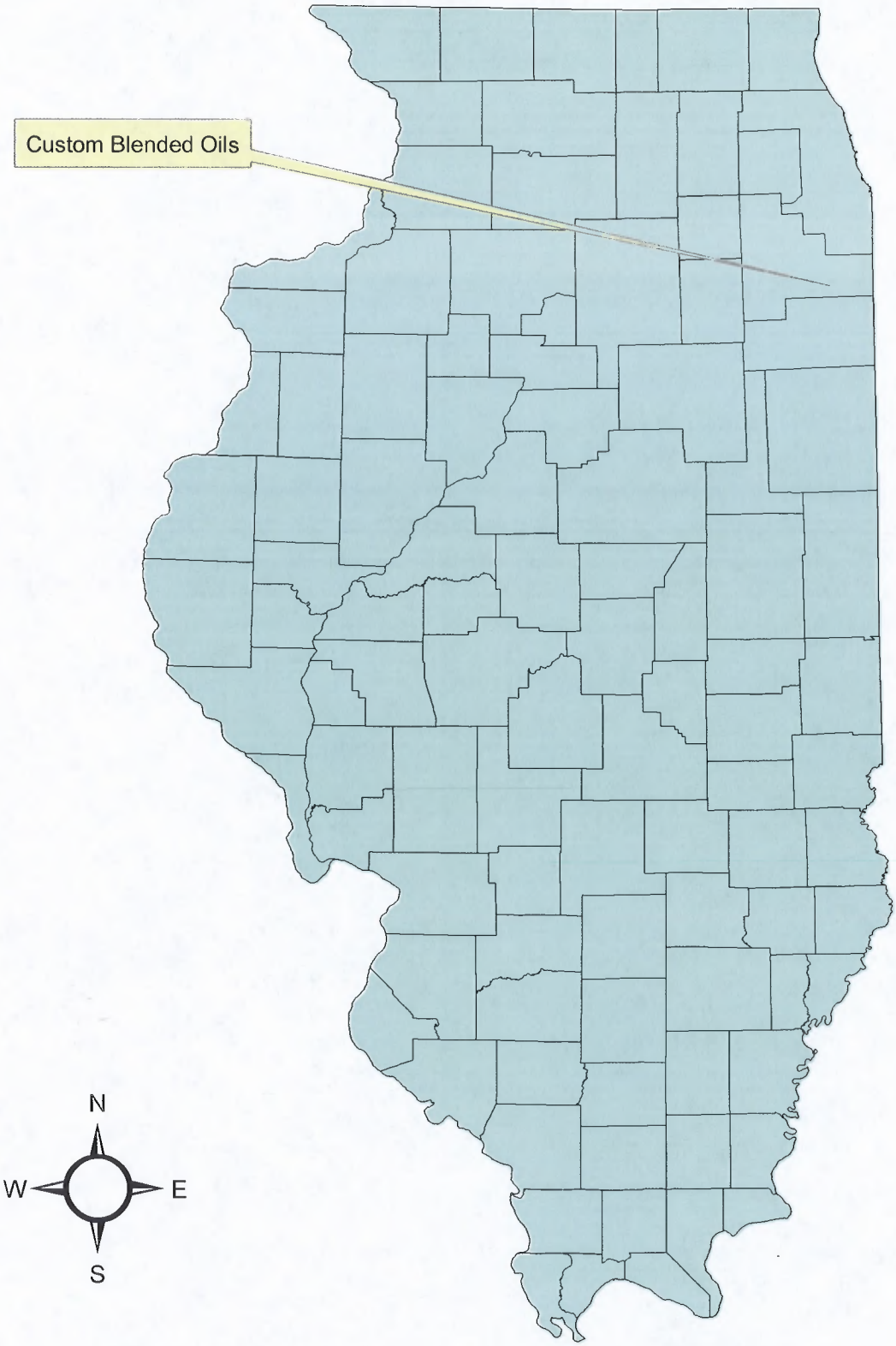

Figure 1
Site Location Map
Custom Blended Oils
ILD069503944 / LPC1970750002

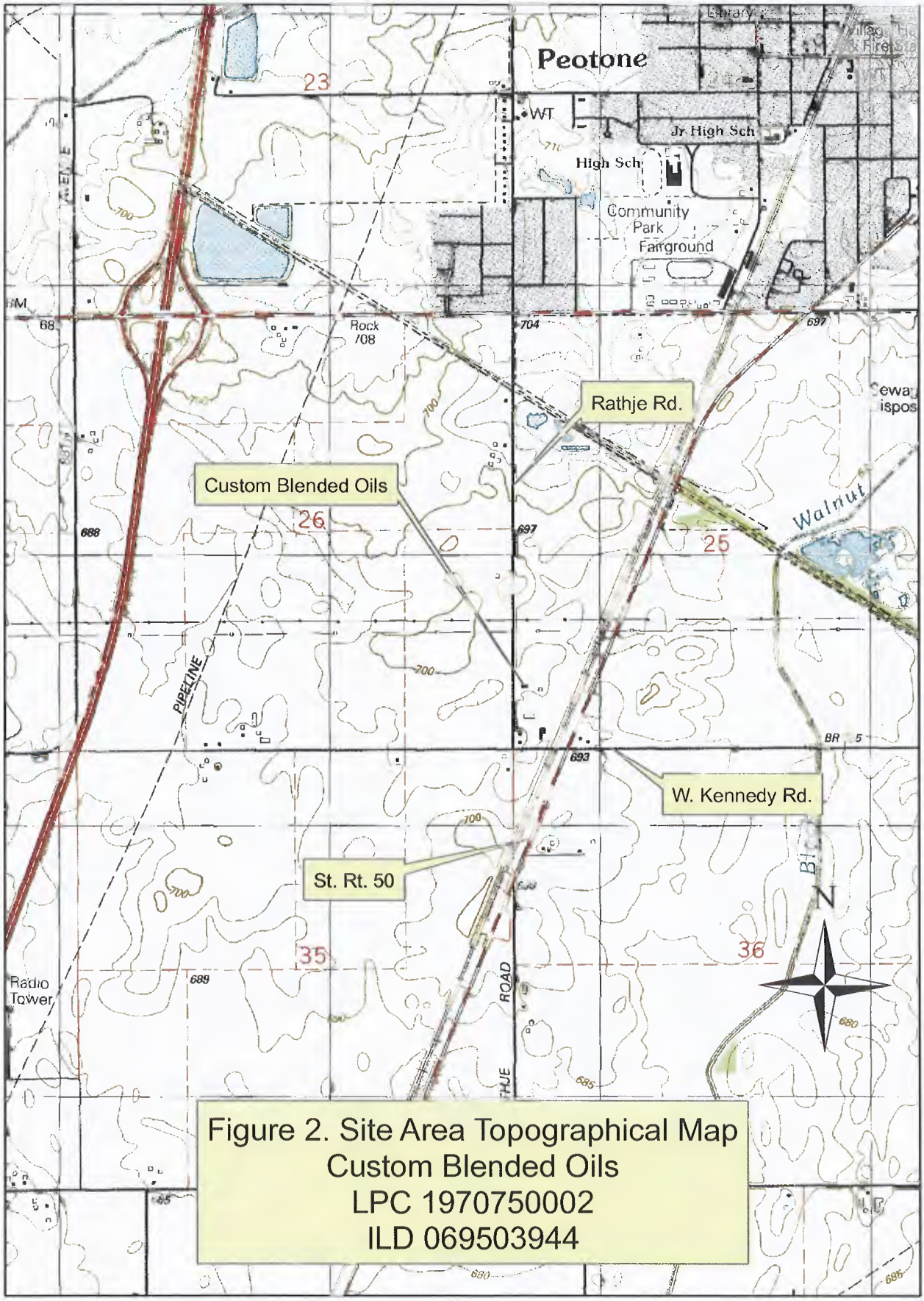

Figure 2. Site Area Topographical Map
Custom Blended Oils
LPC 1970750002
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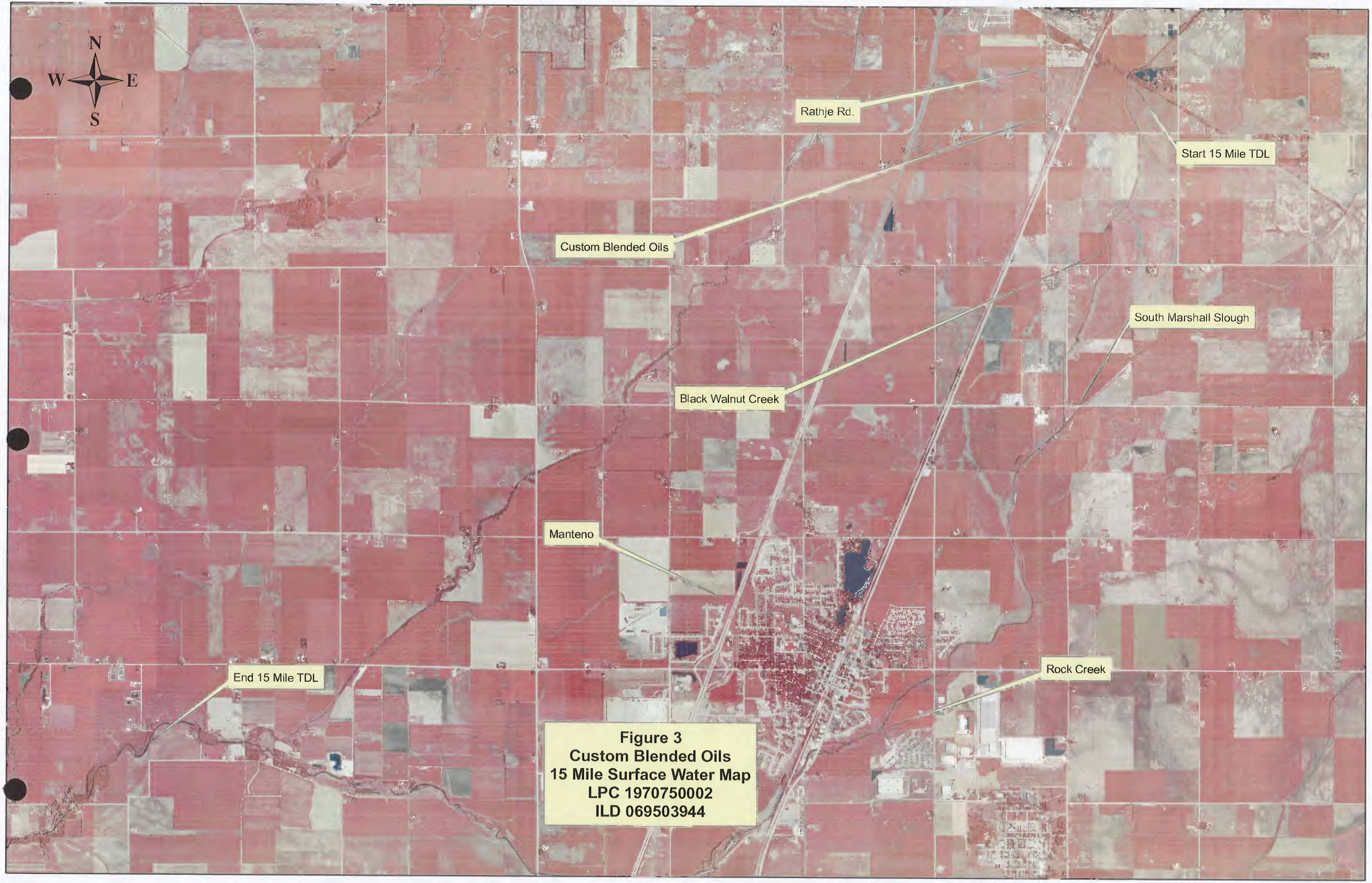

Figure 3
Custom Blended Oils
15 Mile Surface Water Map
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Figure 4
Custom Blended Oils
Soil and Groundwater Sample Location Map
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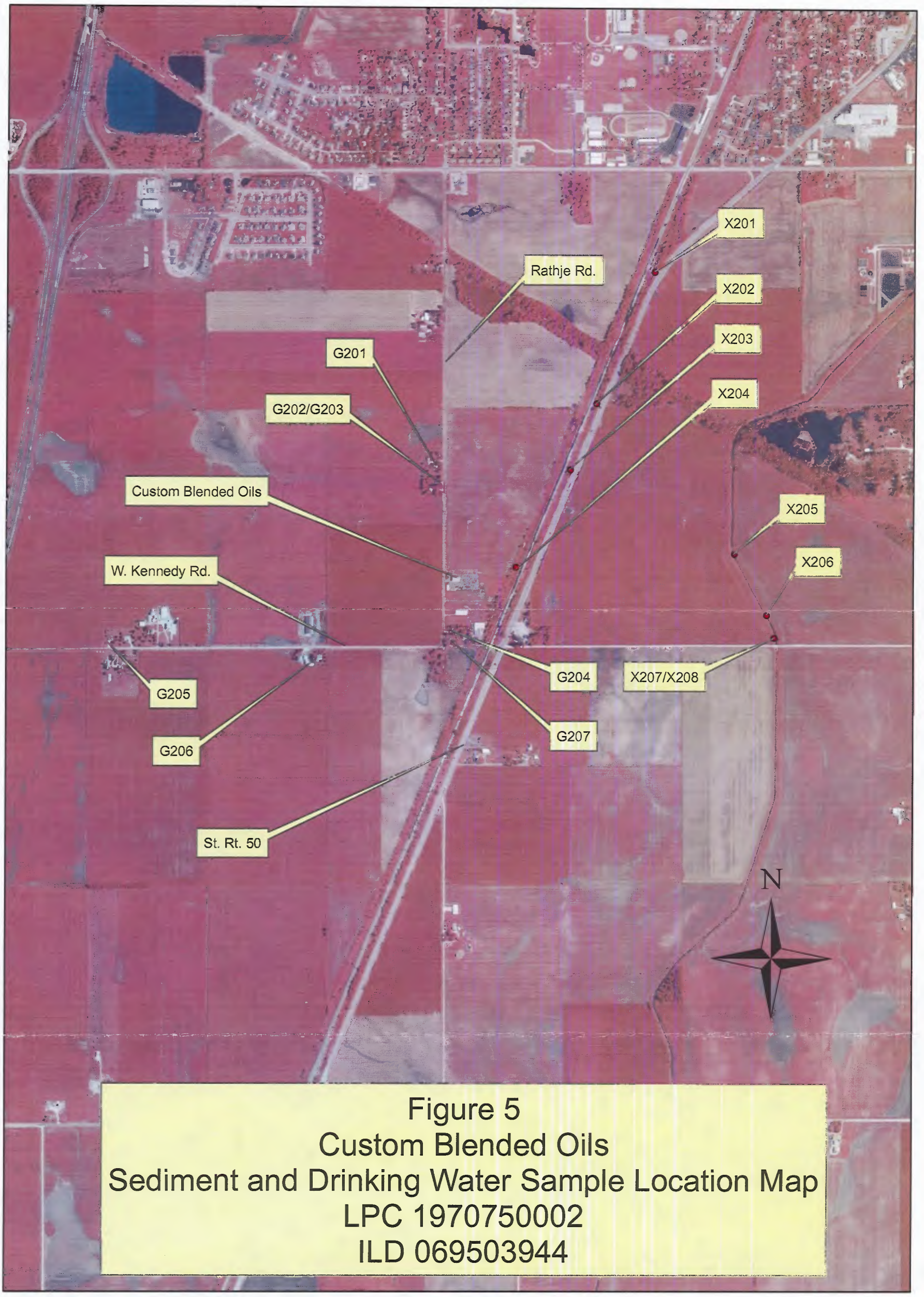

Figure 5
Custom Blended Oils
Sediment and Drinking Water Sample Location Map
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Table 1.1, Volatile Soil Sample Summary										
ug/kg	X101		X102		X103		X104		X105	
1,1,1,2-Tetrachloroethane	U	J	U	J	U	J	U	J	U	J
1,1-Dichloroethane	U		110		U		U		U	J
1,1-Dichloroethene	U		42		U		U		U	
4-Bromofluorobenzene	9.47		6.30		7.25		7.79		7.37	
Acetone	230		130		44		59		190	
Benzene	5.4		8.4		U		U		13	
Benzene-d6	8.90		6.36		6.43		6.59		6.18	
Bromomethane	37	J	17	J	16	J	17	J	11	J
Carbon disulfide	15		U		U		U		U	
Chlorobenzene	6.0		U		U		U		U	
Chloroethane	U	J	5.0		U		U		U	J
cis-1,2-Dichloroethene	U		1600		9.9		2.5		U	
Ethylbenzene	3.6	J	U		U		U		2.4	
Isopropylbenzene	U	J	U	J	U	J	U	J	39	J
Methylene chloride	13		9.2		9.0		9.2		8.4	
Naphthalene	U		U		U		U		170	
n-Butylbenzene	U		U		U		U		32	
n-Propylbenzene	U		U		U		U		66	
o-Xylene	U		U		U		U		U	
p-Isopropyltoluene	U		U		U		U		4.9	
sec-Butylbenzene	U		U		U		U		28	
Toluene	8.7		5.9		U		U		5.7	
trans-1,2-Dichloroethene	U		150		U		U		U	
Trichloroethene	U		160		U		U		U	
Vinyl chloride	U		81		U		U		U	

Table 1.2, Volatile Sediment Soil Sample Summary																
ug/kg	X201		X202		X203		X204		X205		X206		X207		X208	
4-Bromofluorobenzene	7.98		12.7		14.7		10.5		9.08		10.5		9.85		10.4	
Acetone	18		35		U		31		190		200		470		390	
Bromomethane	18	J	30	J	U	J	24	J	21	J	17	J	19	J	20	J
Carbon disulfide	U		U		U		U		35		4.9		10		10	
Methylene chloride	18		22	J	23	J	16	J	13		15		14	J	14	J

Table 1.3, Volatile Organic Drinking Water Sample Summary

ug/L	G201		G202		G203		G204		G205		G206		G207		TB01		FB01	
Acetone	3.6	J	4.6	J	U		4.5	J	3.3	J	3.7	J	U		13		U	
Bromomethane	U		U		U		U		0.4	J	U		0.5	J	0.4	J	0.4	J
4-Bromofluorobenzene	4.4		4.5		4.5		4.5		4.4		4.4		4.3		4.5		4.4	
Hexachlorobutadiene	U		U		U		U		U		U		U		0.2	J	U	
Methylene chloride	2.1	J	2.1	J	2.0	J	2.1	J	2.1	J	2.1	J	2.1	J	2.0	J	2.1	J
Naphthalene	U		U		U		U		U		U		U		0.2	J	U	
1,1,2-Trichloroethane	U		U		U		U		U		U		U		0.1	J	U	
1,1,1-Trichloroethane	U		U		U		U		U		U		U		0.1	J	U	

Table1.4, Volatile Groundwater Sample Summary

ug/kg	G101		G102		G103		G104		FB01		TB01		FB01	
Acetone	9.0		6.5		3.5	J	8.4		4.8	J	9.8		4.8	J
Bromomethane	U		0.8	J	U		U		U		U		U	
4-Bromofluorobenzene	4.7		4.6		4.6		4.7		4.7		4.7		4.7	
Benzene	0.1	J	U		U		0.1	J	U		U		U	
Methylene chloride	2.2	J	1.9	J	1.9	J	2.1	J	2.1	J	2.0	J	2.1	J
m,p-Xylene	U		U		U		0.2	J	U		U		U	

Table 2.1, Pesticide/PCB Soil Sample Summary

ug/kg	X101	X102	X103	X104	X105	X106	X107	X108
4,4'-DDD	U	U	U	U	U	2.71 J	U	U
4,4'-DDE	U	U	U	1.92	U	U	U	U
4,4'-DDT	1.08 J	U	U	4.81 J	5.97 J	2.71 J	U	U
Aldrin	U	U	U	1.92	U	U	U	U
alpha-Chlordane	U	U	U	U	U	2.71	2.45	2.42
beta-BHC	U	U	U	2.88	U	U	U	U
Decachlorobiphenyl	17.3	13.3	14.3	17.3	14.9	24.4	20.8	20.6
Decachlorobiphenyl	21.7	13.3	15.2	21.2	18.9	28.5	27.0	26.7
delta-BHC	U	U	U	U	U	U	1.23	U
Dieldrin	U	U	1.79	U	1.99	4.07	4.90	3.63
Endosulfan II	1.08	U	U	U	U	U	U	U
Endosulfan sulfate	U	3.80	U	U	U	U	3.68	3.63
Endrin aldehyde	U	U	U	5.77	4.98	U	U	U
gamma-Chlordane	U	U	U	U	U	6.78	3.68	U
Heptachlor	3.25	U	U	3.85	2.99	U	U	U
PCB-1016	U	U	U	63.5	U	U	U	U
PCB-1260	U	U	U	88.5	21.9	U	U	U
Tetrachloro-meta-xylene	14.1	13.3	12.5	13.5	13.9	20.4	20.8	18.2
Tetrachloro-meta-xylene	14.1	14.3	13.4	12.5	13.9	19.0	18.4	18.2

Table 2.2, Pesticide/PCB Sediment Sample Summary

ug/kg	X201	X202	X203	X204	X205	X206	X207	X208
4,4'-DDD	U	U	4.74 J	2.72 J	1.13 J	2.71 J	U	U
4,4'-DDE	2.96	U	U	U	1.13	U	U	U
4,4'-DDT	5.93 J	5.85 J	4.74 J	2.72 J	2.26 J	2.71 J	U	U
alpha-Chlordane	U	7.80	U	U	2.26	2.71	2.45	2.42
Decachlorobiphenyl	26.7	33.1	49.7	23.1	19.2	24.4	20.8	20.6
Decachlorobiphenyl	32.6	46.8	52.1	29.9	23.7	28.5	27.0	26.7
delta-BHC	U	U	U	U	U	U	1.23	U
Dieldrin	2.96	7.80	U	U	3.38	4.07	4.90	3.63
Endosulfan sulfate	5.93	U	U	U	U	U	3.68	3.63
Endrin aldehyde	5.93	17.5	U	U	U	U	U	U
gamma-BHC (Lindane)	U	1.95	U	U	U	U	U	U
gamma-Chlordane	U	U	U	U	U	6.78	3.68	U
PCB-1260	80.0	103	109	39.4	U	U	U	U
Tetrachloro-meta-xylene	29.6	33.1	37.9	23.1	18.1	20.4	20.8	18.2
Tetrachloro-meta-xylene	26.7	31.2	37.9	21.7	16.9	19.0	18.4	18.2

Table 2.3, Pesticide/PCB Drinking Water Sample Summary								
ug/L	G201	G202	G203	G204	G205	G206	G207	FB01
Decachlorobiphenyl	0.170	0.170	0.180	0.180	0.190	0.190	0.190	0.170
Decachlorobiphenyl	0.180	0.190	0.190	0.190	0.200	0.200	0.200	0.180
Tetrachloro-meta-xylene	0.150	0.150	0.150	0.150	0.160	0.150	0.160	0.160
Tetrachloro-meta-xylene	0.170	0.170	0.170	0.170	0.180	0.170	0.170	0.170

Table 2.4, Pesticide/PCB Groundwater Sample Summary					
ug/L	G101	G102	G103	G104	FB01
4,4'-DDD	U	U	0.040 J	U	U
Decachlorobiphenyl	0.170	0.170	0.190	0.190	0.180
Decachlorobiphenyl	0.180	0.170	0.200	0.200	0.190
Tetrachloro-meta-xylene	0.140	0.160	0.140	0.150	0.110
Tetrachloro-meta-xylene	0.140	0.120	0.150	0.160	0.140

Table 3.1, Organic Soil Sample Summary										
ug/kg	X101		X102		X103		X104		X105	
1,3,5-Trinitrobenzene	U	J	U	J	U	J	U	J	U	J
2,4,6-Tribromophenol	5000		3000		4000		3000		5000	
2-Fluorobiphenyl	4000		2000		4000		1000		4000	
2-Fluorophenol	4000		2000		4000		2000		3000	
2-Methylnaphthalene	U		U		U		U		4400	
Acenaphthene	U		U		U		U		350	
Anthracene	U		U		U		U		73	
Butyl benzyl phthalate	U	J	U	J	U	J	U	J	69	J
Chrysene	U		U		U		U		71	
Dibenzofuran	U		U		U		U		420	
Fluorene	U		U		U		U		740	
Naphthalene	U		U		U		U		1200	
Phenanthrene	U		U		U		U		1400	
Phenol	U		U		U		U		U	
Pyrene	U		U		U		U		190	

Table 3.2, Organic Sediment Sample Summary

ug/kg	X201		X202		X203		X204		X205		X206	X207	X208	
1,3,5-Trinitrobenzene	U	J	U	J	U	J	U	J	U	J	U	U	U	J
2,4,6-Tribromophenol	6000		5000		10000		5000		5000		5000	5000	6000	
2,4-Dinitrophenol	U	J	U	J	U	J	U	J	U	J	U	U	U	J
2-Fluorobiphenyl	5000		4000		6000		5000		3000		4000	5000	5000	
2-Fluorophenol	5000		4000		5000		5000		3000		5000	4000	5000	
Benzo (a) anthracene	U		U		160		U		U		U	U	U	
Benzo (k) fluoranthene	U		U		200		U		U		U	U	U	
Chrysene	U		U		200	K	U		U		U	U	U	
Fluoranthene	U		U		330	K	U		U		U	U	100	
Phenanthrene	U		U		190		U		U		U	U	U	
Pyrene	U		U		280	K	U		U		U	U	74	

Table 3.3, Organic Drinking Water Sample Summary																
ug/L	G201		G202		G203		G204		G205		G206		G207		FB01	
Phenol	U		U		U		U		U		U		2.9		U	
2-Fluorophenol	50		50		50		50		50		50		40		40	
2-Fluorobiphenyl	50		60		60		60		50		50		50		60	
2,4,6-Tribromophenol	50		50		50		50		50		50		50		40	
Bis(2-ethylhexyl)phthalate	U	J	U	J	U	J	U	J	U	J	3.2	J	3.2	J	3.7	J

Table 3.4, Organic Groundwater Sample Summary					
ug/L	G101	G102	G103	G104	FB01
2-Fluorophenol	30	30	30	30	30
2-Fluorobiphenyl	50	50	60	50	40
2,4,6-Tribromophenol	60	60	60	50	40

Table 4.1, Inorganic Sediment Sample Summary																
mg/kg	X201		X202		X203		X204		X205		X206		X207		X208	
Antimony	0.92		0.84		0.47	J	0.47	J	0.33	J	0.48	J	0.41	J	0.46	J
Arsenic	13		23		9.1		13		5.0		14		10		9.6	
Cadmium	0.78		0.65		0.64		0.57		0.16		0.35		0.24		0.20	
Lead	74		100		27		38		9.4		19		13		13	
Selenium	1.3		0.76	J	0.96		0.73	J	0.33	J	0.54	J	0.49	J	0.48	J
Thallium	U		U		U		U		U		U		U		U	

Table 4.2, Inorganic Soil Sample Summary										
mg/kg	X101		X102		X103		X104		X105	
Antimony	0.59	J	0.74	J	0.32	J	0.23	J	0.78	
Arsenic	9.2		12		5.2		3.7		11	
Cadmium	0.14		0.18		0.10		0.07		0.26	
Lead	18		15		6.9		5.9		15	
Selenium	0.31	J	0.70	J	U		U		0.28	J
Thallium	U		U		U		U		U	

TABLE 4.3, Inorganic Groundwater Sample Summary										
ug/L	G101		G102		G103		G104		FB	
Antimony	U		U		U		1.7	J	U	
Arsenic	26.0		6.1		15.9		30.3		U	
Cadmium	0.5		0.4		U		0.6		U	
Lead	23.4		8.5		4.5		26.2		U	
Selenium	U		U		U		U		U	
Thallium	1.4	J	U		U		1.6	J	U	

Table 4.4, Inorganic Drinking Water Sample Summary																
ug/L	G201		G202		G203		G204		G205		G206		G207		FB	
Antimony	U		U		U		U		U		U		U		U	
Arsenic	0.6	J	4.3		4.2		U		8.2		1.4	J	3.7		U	
Cadmium	U		U		U		U		U		U		U		U	
Lead	U		0.9	J	U		0.7	J	U		5.3		U		U	
Selenium	U		U		U		U		U		U		U		U	
Thallium	U		U		U		U		U		U		U		U	

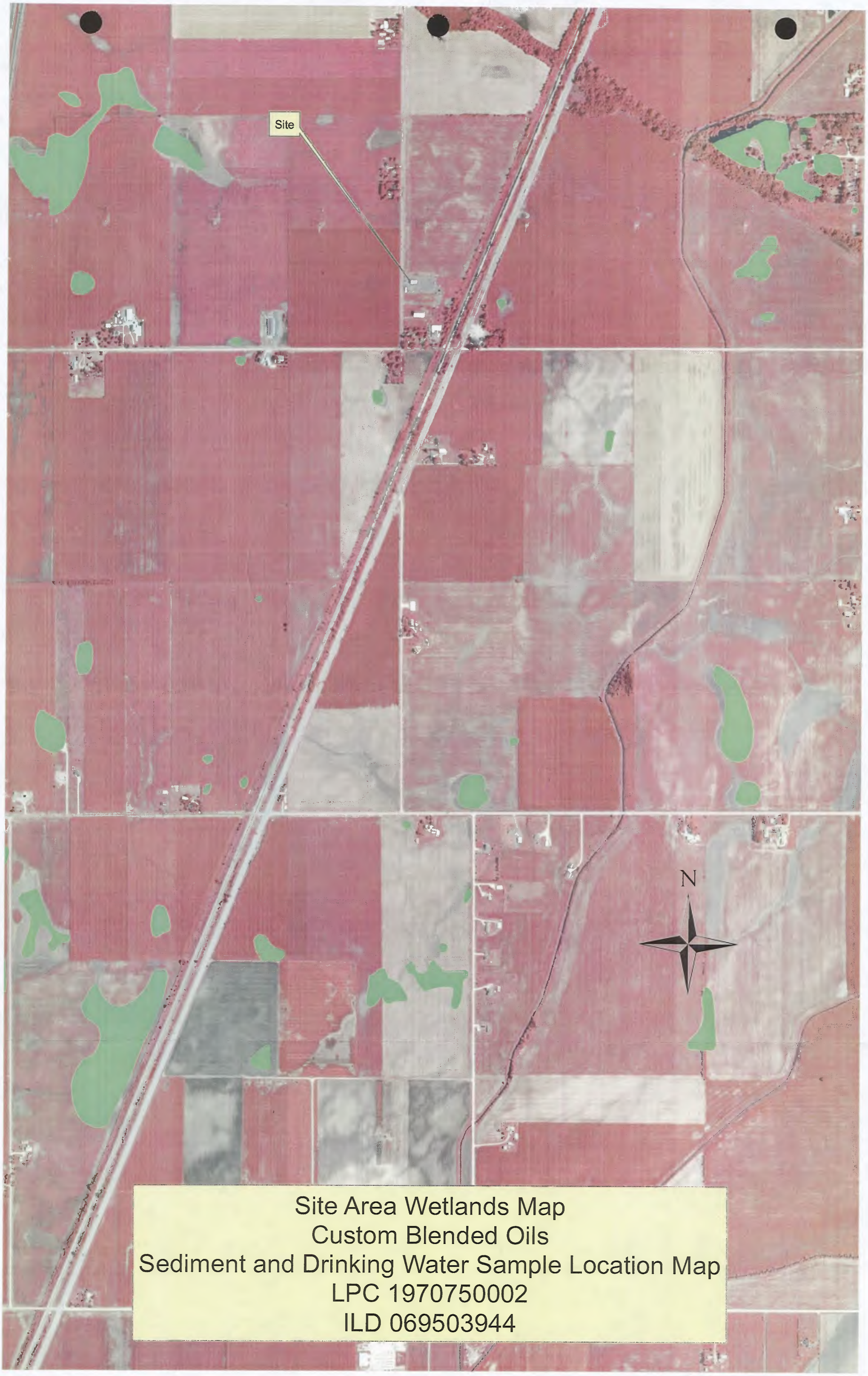
Table 5.1, Soil/Sediment Sample Descriptions

Sample Number	*Location*	*Appearance / Sampler Notes*
X201	background, surface water pathway	silty clay, medium brown
X202	drainage along railroad grade to Black Walnut Creek	silty clay, medium brown
X203	drainage along railroad grade to Black Walnut Creek	silty some clay, organic material, dark brown
X204	near nothereast corner of site	silty clay, medium brown
X205	downstream on Black Walnut Creek	silt sand, organic material, black-dark brown
X206	downstream of X205 on Black Walnut Creek	silt sand, organic material, black-dark brown
X207	downstream of X206 on Black Walnut Creek	silt sand, organic material, black-dark brown
X208	duplicate of X207	
X101	northwest corner of spill area	stained clay @ 7'
X102	northeast corner of spill area	glacial till, pebbles, small granite @ 10'
X103	middle of the western portion of spill area	sand, course dark tan @ 7-8'
X104	northwest quadrant of spill area	clay sand, @ 6'
X105	northwest quadrant of spill area	glacial till @ 7'

Table 5.2, Groundwater / Drinking Water Sample Descriptions

Sample Number	*Location*	*Appearance / Sampler Notes*
G101	unsecure pvc well north of building	very turbid
G102	unsecure pvc well southeast corner of site	oil sheen, cloudy-turbid
G103	unsecure pvc well eastside of site	very turbid
G201	31560 South Rathje	drinking, cooking, gardening
G202	31612 South Rathje	cooking
G203	duplicate of G202	
G204	31847 South Rathje	drinking, cooking
G205	8462 West Kennedy	dirnking, cooking, gardening
G206	8209 West Kennedy	dirnking, cooking, gardening
G207	7958 West Kennedy	from garden hose

Appendix A
Site Area Wetlands Map



Site Area Wetlands Map
Custom Blended Oils
Sediment and Drinking Water Sample Location Map
LPC 1970750002
ILD 069503944

Appendix B
Sample Photographs


Thermogas
CUSTOM BLENDED OIL
DATE 6 11 08
TIME 1055
SAMPLE G101
G104


Thermogas
CUSTOM BLENDED OIL
DATE 6 11 08
TIME 1055
SAMPLE G101
G104


CUSTOM BLENDED OIL
DATE 6 11 08
TIME 1350
SAMPLE G102


CUSTOM BLENDED
OIL
DATE 06 16 08
TIME 1300
SAMPLE G102


CUSTOM BLENDED
OIL
DATE 06 16 08
TIME 1350
SAMPLE G201


CUSTOM BLENDED
OIL
DATE 06 16 08
TIME 1430
SAMPLE G204


CUSTOM BLENDED
OIL
DATE 06 17 08
TIME 950
SAMPLE G205


CUSTOM BLENDED
OIL
DATE 06 17 08
TIME 10 15
SAMPLE G206


CUSTOM
ENDED
OIL
DATE
TIME
SAMPLE


CUSTOM BLENDED OIL
DATE 6 11 08
TIME 1055
SAMPLE G101
G104
Thermogas


CUSTOM BLENDED OIL
DATE 6 11 08
TIME 1055
SAMPLE G101
G104
Thermogas


CUSTOM BLENDED OIL
DATE 6 11 08
TIME 1350
SAMPLE G102


CUSTOM BLENDED
OIL
DATE 06 16 08
TIME 1300
SAMPLE G102